

WHAT IS CLAIMED IS:

1. A switch device comprising:
 - a base section;
 - a plurality of rollers, which are arranged on the base section, extending in one
 - 5 plane in a radial direction of the base section;
 - an operation unit which is rotatably mounted on the base section, with a circumferential edge supported on the rollers; and
 - a rotation-detecting section, which is provided on the base section and detects the rotation of the operation unit.
- 10 2. The switch device according to claim 1, wherein each of the rollers has a roller part, which contacts the circumferential edge of the operation unit.
3. The switch device according to claim 1, wherein the operation unit comprises a approximately disc-shaped top plate and a projection which projection protruding from the top plate in a direction intersecting with the direction the top plate is depressed and being
- 15 allowed to move on the rollers, with its lower surface contacting the rollers.
4. The switch device according to claim 1, wherein the base section has a plurality of guide pins which protrude toward the operation unit, the operation unit has a guide groove which is made in a surface opposing the base section, and the guide pins are slidably inserted in the guide groove to slide in the guide groove.
- 20 5. The switch device according to claim 3, wherein the base section has a plurality of guide pins which protrude toward the top plate of the operation unit, the top plate has a guide groove which is made in a surface opposing the base section and which extends in the circumferential direction of the operation unit, and the guide pins are slidably inserted in the guide groove to slide in the guide groove.
- 25 6. The switch device according to claim 5, wherein said plurality of guide pins are positioned at substantially the same distance from the center of the top plate of the operation section.
7. The switch device according to claim 5, wherein each of the guide pins comprises a shaft and a guide roller, which is rotatably mounted on the shaft.

8. The switch device according to claim 4, wherein the top plate has a pair of annular guide ribs which are concentric to the top plate, have different diameters and define the guide groove.

9. The switch device according to claim 8, wherein the rotation-detecting section is
5 arranged on the base section and comprises a second gear and a rotation-detecting sensor for detecting the rotation of the second gear, and the operation unit has a first gear provided on the circumferential surface of the guide rib and set in mesh with the second gear.

10. The switch device according to claim 3, wherein the operation unit has a first
10 gear on a surface which opposes the base section, the rotation-detecting section arranged on the base section which comprising the second gear set in mesh with the first gear and the rotation-detecting sensor for detecting the rotation of the second gear.

11. The switch device according to claim 1, wherein the base section comprising a
base part which supports the operation unit, allowing the same to rotate, and a rotational
15 drive section which is provided on the base part to move in a direction intersecting with the direction the operation unit rotates and which supports rollers, allowing the same to rotate, said rollers supporting the operation unit; and a motion-detecting section is provided to detect the motion of the rotational drive section.

12. The switch device according to claim 1, wherein the base section comprises a
20 base part which supports the operation unit, allowing the same to rotate, and a rotational drive section which is provided on the base part to move in a direction intersecting with the direction the operation unit rotates and which supports rollers, allowing the same to rotate, said rollers supporting the operation unit; a motion-detecting section is provided to detect the motion of the rotational drive section; the operation unit has the first gear on a
25 surface which opposes the base section; and the rotation-detecting section comprises the second gear arranged on the base part set in mesh with the first gear to move in the direction the rotational drive section is moved, and the rotation-detecting sensor for detecting the rotation of the second gear.

13. The switch device according to claim 11, further comprising an annular cover

rotatably supported by the base section and holding the operation unit at the inner circumference, allowing the same to move in axial direction.

14. The switch device according to claim 13, wherein the operation unit has a fastening member, the annular cover has, at the inner circumference, an engagement member which positions the fastening member of the operation unit in the circumferential direction and which is able to move in axial direction to engage with and disengage from the fastening member of the operation unit.

15. The switch device according to claim 13, wherein the base section comprises a plurality of rollers which support the annular cover, allowing the same to rotate.

16. The switch device according to claim 1, wherein a resistance which the operation unit receives when rotated with respect to the base section is set to be substantially the same as a load which the turntable of a record player receives when rotated.

17. A data-processing apparatus comprising:

a data-reading section, which reads data from a recording medium;

a data-processing section, which processes the data, read from the recording medium;

the switch device of the type according to claim 1; and

a process control section which changes modes in which the data-processing section processes the data, when the rotation-detecting section of the switch device detects that the operation unit is rotating.

18. A data-processing apparatus comprising:

the data-reading section, which reads data from a recording medium;

the data-processing section, which processes the data, read from the recording medium;

the switch device of the type defined in claim 11; and

a process control section which changes modes in which the data-processing section processes the data, when the motion-detecting section of the switch device detects that the rotational drive section is moving.

19. A playback apparatus comprising:

the data-processing apparatus of the type defined in claim 17; and
a playback section that reproduces data processed by the data-processing
apparatus.